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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,838

06/06/2005

Masaru Nishinaka

88496.0008

8623

26021 7590 03/19/2009

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EXAMINER

JACKSON, MONIQUE R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/537,838	Applicant(s) NISHINAKA ET AL.	
	Examiner Monique R. Jackson	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14,16-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14,16-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/15/08 has been entered.
2. Claims 1, 3-14, 16-20 and 22 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1, 3-14, 16-20 and 22 are rejected under 35 U.S.C. 102(a), (b) or (e) as being anticipated by Katsuki et al (USPN 6,824,827, also printed as JP 2002-293965.) Katsuki et al teach a method of making a polyimide film having a thin metal layer wherein Katsuki et al teach that the polyimide film is treated with a permanganate solution and further treated by plasma treatment immediately before forming the thin metal layer to improve adhesion of the metal layer to the polyimide film, wherein the plasma treatment preferably uses argon gas (Abstract; Col. 6, lines 4-44.) Katsuki et al teach that the polyimide film comprises a two- or three-layer film having a thermoplastic polyimide layer on one or both surfaces of a highly heat resistant polyimide base layer (*reads upon the claimed non-thermoplastic polyimide layer*) wherein the thermoplastic polyimide is formed from aromatic diamines and aromatic dianhydrides including BTDA (*which reads upon the claimed structure for A*) and wherein the polyimide layers have thickness ranges that read upon the claimed thickness (Col. 3-Col. 4; Col. 5, lines 20-65.)

Art Unit: 1794

Katsuki et al teach that the treated polyimide film has improved adhesion to metal formed by vapor deposition or a combination of vapor deposition and electroless plating and/or electroplating, wherein the metal layer comprises a first metal layer formed by vapor deposition, a second metal layer formed by vapor deposition and/or plating, and an outer metal layer formed by plating; wherein the first metal is preferably nickel, chromium, cobalt, palladium, nickel-copper alloy or others as claimed; the second and third layers may be copper (Col. 6-7.) Katsuki et al also teach laminate with a copper foil and use of the laminate as a substrate in making FPCs, TAB tape carriers, multilayer FPCs, and rigid-flex circuit boards (Col. 7-8.) With respect to the instantly claimed limitations related to depositing the metal while heating the thermoplastic layer, particularly at a temperature of 100°C, the Examiner takes the position that the claimed limitation is a process limitation that does not appear to provide a final end product different from the final end product taught by Katsuki et al, particularly given that Katsuki et al specifically teach preheating the film to a temperature of 30 to 280°C prior to depositing the metal (Col. 7, lines 34-47; Examples 1-3.)

Response to Arguments

4. Applicant's arguments filed 12/15/08 have been fully considered but they are not persuasive. The Applicant argues that Katsuki et al do not teach the instantly claimed B structure which as amended now excludes the biphenyl structures taught by Katsuki et al. However, the Examiner notes that Katsuki et al also disclose the use of PTDA or 3,3',4,4'-benzophenonetetracarboxylic acid dianhydride which reads upon the instantly claimed second structure of formula (2) and hence Katsuki et al anticipates the claimed invention. With respect to Applicant's arguments that Katsuki et al fail to teach that the metal is deposited while heating,

Art Unit: 1794

particularly at a temperature of 100°C, the Examiner takes the position that the claimed limitation is a process limitation that does not appear to provide a final end product different from the final end product taught by Katsuki et al, particularly given that Katsuki et al specifically teach preheating the film to a temperature of 30 to 280°C prior to depositing the metal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
March 16, 2009